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GENERAL STUDIES (TEST CODE : 1065)

Name of Candidate	KUMAR ANURAG		
Medium Eng./Hindi	ENG	Registration Number	26074
Center	HSC	Date	12/7/18

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	12.5	
2	12.5	
3	12.5	
4	12.5	
5	12.5	
6	12.5	
7	12.5	
8	12.5	
9	12.5	
10	12.5	
11	12.5	
12	12.5	
13	12.5	
14	12.5	
15	12.5	
16	12.5	
17	12.5	
18	12.5	
19	12.5	
20	12.5	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in ENGLISH & HINDI
   इसमें **बीस** प्रश्न हैं **अंग्रेजी और हिन्दी** में छपे हैं।
3. All questions are compulsory.
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

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Answer all the questions in NOT MORE THAN 200 WORDS each. Content of the answers is more important than its length. All questions carry equal marks.

12.5X20=250

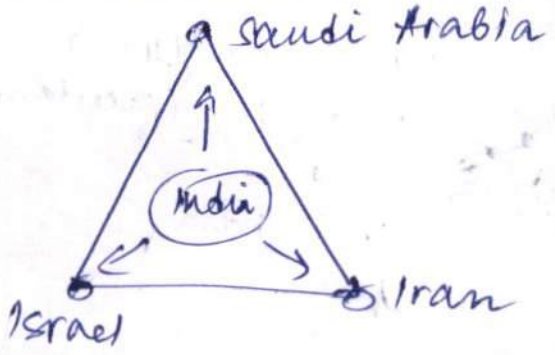
1. Despite many challenges, India has persisted in consolidating relations with Iran. Explain. In the context of Chabahar Port, discuss the significance of other actors in Indo-Iranian relations.

   कई चुनौतियों के बावजूद भारत ने ईरान के साथ संबंधों को सुदृढ़ बनाये रखा है। व्याख्या कीजिए। चाबहार पत्तन के संदर्भ में, भारत-ईरान संबंधों में अन्य कर्ताओं के महत्व की चर्चा कीजिए।

India is one of the largest importer of oil and gas from the middle east, thus bringing India-Iran ties into prominence.

Challenges to India - Iran ties

* Middle-East trilemma



due to rivalry between Saudi Arabia, Iran and Israel.

* US sanctions → on economic ties with Iran; as Iran Nuclear Deal has been

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refuted by the current US administration.

* China - Pakistan axis → on the Persian gulf region

Despite challenges:

* India imports large quantum of oil & gas from Iran
* has created a dehyphenated relationship with other players in the region, such as Israel & Saudi Arabia.
* Investing in Chabar port creation.

Significance of other actors

* Pakistan → sharing proximity to Chabar port through Gwadar port;

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large muslim population and shares ties with Iran through OIC (org. of Islamic cooperation) etc.

→ may impact India - Iran ties negatively

* China → heavy investment in Gwadar; cheque book diplomacy with both Pakistan and Iran;

↳ One Belt One Road connectivity to middle east, may hamper Indian prospects.

* Gulf nations → who command the trade through persian gulf will have major entrants such as India & China in the region.

It is significant for India to develop Chabar not only on paper but on ground and win the trust of nations in its proximity.

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2. It has been argued that recent developments in Maldives marked a test for the Neighbourhood First policy of India. In this context, do you think India's neighbourhood policy requires a major overhaul to deal with such developments?

यह तर्क दिया जाता है कि मालदीव के हालिया घटनाक्रम ने भारत की "पड़ोस पहले" की नीति को कसौटी पर कसा है। इस संदर्भ में, क्या आप मानते हैं कि इस प्रकार के घटनाक्रमों से निपटने के लिए भारत की पड़ोस नीति का आमूलचूल निरीक्षण करके उसे दुरुस्त करने की आवश्यकता है?

Recent developments in Maldives:

→ imposition of emergency rule in Maldives due to conflicts

→ India's opposition to such emergency measures and its immediate revokation.

India's Neighbourhood policy

→ based on Gujral doctrine

→ one way contribution to small neighbouring countries without expecting reciprocity

→ financial, political and social support to neighbours

→ Mutual cooperation and respect for inner matters, policies and non-interference.

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Neighbourhood policy & Maldives

→ Maldives appeared pro-China and ignored Indian request

→ also returned the helicopter gifted by India

→ signed FTA with China

Need for policy ~~major~~ overhaul

* To incorporate the idea that:

→ small nations are provided with enough opportunities to decide their own foreign relations without Indian pressures.

eg: similar case with Nepal

→ incorporation of soft policy through culture, people and regular ministerial visit

→ respect the interest of neighbouring nations

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→ creating relations and winning trust independent of China → and not appearing as a competitor.

* ASEAN model where large nation (Indonesia) takes a back seat and lets the smaller nations dictate policies.

→ regular meeting of the leaders of the nations.

Due to geographical proximity ~~the~~ India has inherent advantage. However, such advantages should be transformed into opportunities with mutual understanding.

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3. The developments since the beginning of 21st century have augured well for India-Japan relations, nonetheless terming them natural allies would require further consolidation of the ties. Critically comment.

21वीं शताब्दी के आरंभ के बाद से घटित घटनाक्रम भारत-जापान संबंधों की बेहतरी का पूर्वाभास कराते हैं, फिर भी इन्हें प्राकृतिक सहयोगी कहने के लिए संबंधों को आगे और सुदृढ़ बनाने की आवश्यकता होगी। आलोचनात्मक टिप्पणी कीजिए।

India-Japan relations are based on various pillars :

- China threat in South Asia
- Nuclear technology
- Asian proximity
- Demographic contrast

Developments in 21st century

* Economic Trade resurgance especially post the rise of East Asian tigers and IT boom.

* Investments and technology tie ups such as investment for smart cities, bullet train project etc.

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* Japanese MNCs such as Hitachi, Hitachi set up in India.

* Nuclear sector → Japan and India, Civil Nuclear Agreement; 1st non-NPT country to have agreement with Japan.

* Military ties → to counter China;

* Malabar Exercise → India
→ USA
→ Japan

↳ Quad Grouping → USA
→ Australia
↓ India
↓ Japan

Thus, the relationship offers enough example to illustrate that India-Japan are nothing but natural allies as there interests meet

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* G4 grouping : Japan, India, Brazil, Germany for UNSC membership.

* Japan's support for India's NSG membership.

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4. In view of India's quest to become a leading power globally, assess its potential to achieve desired outcomes and preparedness to address key emerging issues in international arena.

विश्व स्तर पर एक अग्रणी शक्ति बनने की भारत की अभिलाषा के आलोक में, अंतर्राष्ट्रीय क्षेत्र में उभर रहे प्रमुख मुद्दों को हल करने के प्रति वांछित परिणामों को प्राप्त करने की इसकी क्षमता और तैयारियों का आकलन कीजिए।

India's standing globally:

→ 17% of global population
→ 1.8% of global GDP
→ 2% of land area
→ 6th largest economy

Assessing India's quest to global power

Desired outcomes
- inclusive development
- peaceful neighbour & global environment
- tacking climate change
- free & open trade

* peaceful global community

• Potential : India has ~~3rd~~ 4th most powerful army as per Global firepower and hence a credible deterrence
→ nuclear capability

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- Challenges → Fails in terms of technology and innovation
→ CAG report has pointed on its obsolete machinery.

* Free & Open trade

- Potential :→ accounts for 3% of global exports
→ largest producer of milk, vegetables & various agri-products
→ represents interest of developing countries
- Challenges
→ expertise in labour ~~producing~~ intensive products
→ rise of protectionism and failure of India in WTO.

* Climate change

- Potential → large coastline, tropical location
→ initiated International Solar Alliance
→ target of 175 GW of NRE by 2022.

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• Challenges
→ lack of financial resources
→ innovation, technology and skills are limited.

* Inclusive development
• Potential: democracy (world's largest),
→ various poverty alleviation measures & policies
• Challenges
→ Oxfam reports points towards rising inequality
→ prevalence of high illiteracy, malnutrition etc.

Various international negotiation of India have failed to take off on ground due to its limited capabilities and lack of will.
Thus, in order to compete with other rising powers, India needs to focus on its potential & strengths.

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5. Critically analyse the role of non-state actors in international relations and their impact on India's diplomatic ties and strategic interests.
अंतर्राष्ट्रीय संबंधों में राज्येत्तर कर्ताओं की भूमिका और भारत के राजनयिक संबंधों एवं सामरिक हितों पर उनके प्रभाव का आलोचनात्मक विश्लेषण कीजिए।

Non state actors refers to organisations and institutes not affiliated to any state or nation but working independently.
Eg: International NGOs etc.

Non State Actors

Positive impact by
→ Internationally recognised NGOs, CSOs etc
→ eg: Red Cross Society, Amnesty International, YMCA etc.

Negative impact by
→ extremist and terrorist organisations
→ eg: ISIS.

Role of non state actors in IR

Positive Role	Negative Role
(1) Supporting national as well as global interest	(1) Impacting national and global interest adversely

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eg: PETA supporting wildlife

② promoting inclusive growth by highlighting the policy failures.

eg: IFPRI report on malnutrition

③ Collection of funds and capitals and its direction towards the vulnerable regions

eg: Relief during Nepal Earthquake

eg: ISIS spreading terrorism.

② Promoting Inequality by money laundering and tax evasions across nations

③ channelising funds to terrorism, smuggling, trafficking etc.

④ generating animosity between nations.

eg: India - Pak relations

Impact on India's diplomatic ties and strategic interest

Positive Impact

① Strengthens bonds with other nations.

eg: ORF helps in

Negative Impact

① Disturbs India's relationship with its neighbours.

eg: India-Pakistan;

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political negotiations, WEF (World Economic Forum) → economic negotiations.

① Highlights grievance of stakeholders.
eg: through reports on Human Rights, Freedom of Press etc.

③ Provides legitimacy to the claims of India and strengthenes its global image through reports & papers

④ Channelises funds to support various causes and interests.
eg: IPR development, Solar Alliance etc

India-China relationships

② Mobilises funds to ~~im~~ harm India's internal security interest
eg: fuels insurgency

③ Internal disturbances through protests, impacting international treaties & negotiations.
eg: protest against Kudankulam plant

④ Supports capital outflows & inflows illegally.

Regulation and control of both formal and informal non state actors are mandatory for internal security.
eg: FCRA to regulate international NGOs, FATF to regulate illegal money transactions.

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6. Examine the key aspects of India-United Kingdom ties. In this context, how significant is the Commonwealth grouping? Discuss in view of the recent developments.

भारत-यूनाइटेड किंगडम संबंधों के प्रमुख पहलुओं का परीक्षण कीजिए। इस संदर्भ में, राष्ट्रमंडल समूह कितना महत्वपूर्ण है? हाल के घटनाक्रमों के आलोक में चर्चा कीजिए।

India - UK ties are governed by:

* Colonial past - as UK still holds the key to Indian access to Europe
* Trade - largest trading partner in EU with India
* Security - military exercises, UN peacekeeping missions etc.

Commonwealth Groupings

→ comprises 53 members

→ generally countries once under British empire

→ grouping of nations sharing similar past, culture, law and demography.

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Significance of CWG

* Political → comprises roughly 40% of world population, and 30% of global GDP

* Economic : Post Brexit, UK will have to negotiate bilaterally with various trading partners.
Hence, Commonwealth Nations are the most prominent alternative → boost to India-UK direct trade.

* WTO Blockade : Due to non-negotiating behaviour of US and other developed nations, CWG grouping opens for scope of inter-trade

* Stringent laws of EU cort trade can be overcome through ~~bilaterral~~ bilateral negotiation → taking account of interests.
eg: India's dairy & pharma exports to Europe.

* Climate change → Post US exit of Paris Climate Change, the onus on climate change has fallen on other players.

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CWG can provide the platform with India taking the lead.

CWG holds its prominence in the current global scenario dominated by fractures and blockades.

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7. UN Peacekeeping requires reforms to ensure its increased effectiveness and appropriate use in future. Analyse.
भविष्य में संयुक्त राष्ट्र शांतिरक्षण (यू. एन. पीसकीपिंग) की बढ़ी हुई प्रभावशीलता और उचित उपयोग सुनिश्चित करने के लिए इसमें सुधार की आवश्यकता है। विश्लेषण कीजिए।

UN peace keeping or the Blue Helmets are the security forces representing United Nations. Members of UN peacekeeping are contributed to UN from amongst its member nation.

Eg: India is the largest contributor of forces in UN peace keeping

Reforms required

* Issue of representation - richer nations should have larger contribution and representation to bring out the idea of common but differentiated responsibility
* Increasing credibility - through increasing expenditure and armed capabilities, modern equipments and reasonable support.

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* Rule based deployment - of the forces and should not be arbitrarily.
- decision should not be influenced by certain dominant power of UNSC.

* Building trust - between the developed nations and developing nations

* Creating accountability - as such missions are usually in regions without any rule and order.

eg: Allegations of rapes & sexual harrassments by UN peacekeeping forces

* Collective recognition : so that UN missions can be trusted and called for in battles against terrorism & insurgent.

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UN peacekeeping machines are like global police. Hence, the objective should be to make them credible & trustworthy.

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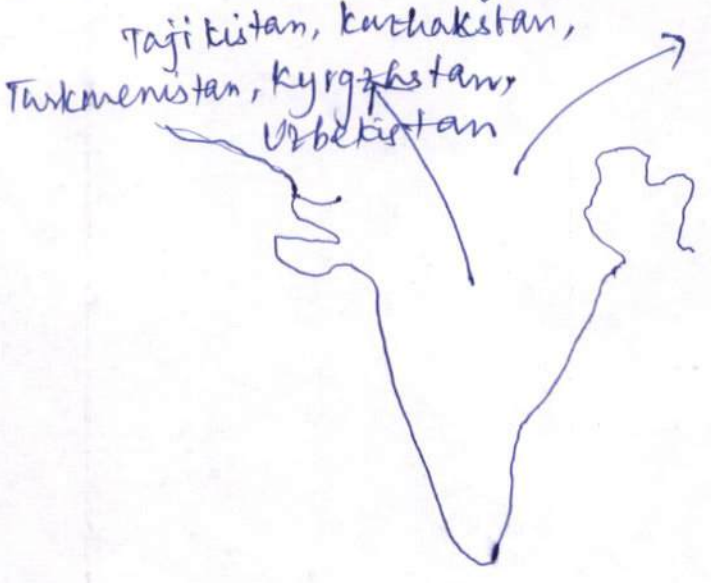
8. Discuss the progress and hurdles in achieving the objectives of India's Connect Central Asia policy. Also suggest measures to overcome these hurdles.

भारत की कनेक्ट सेंट्रल एशिया नीति के उद्देश्यों को प्राप्त करने में हुई प्रगति और बाधाओं की चर्चा कीजिए। इन बाधाओं को दूर करने के उपाय भी सुझाइए।

India's connect central Asia policy is directed towards building political, economical & cultural ties with nations of central Asian region



Progress

→ Prime Ministerial visits and signing of various MOUs.

→ Chabar Port linkage through Iran

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and its connectivity to central Asia

→ signing of INSTC (International North South Transport Corridor) and Ashgabat agreement.

Hurdles

→ landlocked region

→ no direct connectivity → POK, Pakistan and China

→ Heavy dominance of China in the region due to direct linkage

→ slow implementation of the various agreements and projects.

Measures

→ Impetus to international projects such as INSTC, Ashgabat & Chabahar linkage

→ Regular official visits and meetings

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→ India's soft power in the region through yoga & Bollywood.

→ Nuclear agreement and investments (capital); service trade impetus.

It is important for India to widen its international network beyond US, Russia and Gulf, in order to counter the influence of China and also to emerge as a major global player.

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9. Urban terrorism has been on the rise in recent times. Identify the factors that make urban centres susceptible to terrorist attacks. What lessons can be learnt from the past attacks to put in place effective measures to combat it?

हाल के समय में शहरी आतंकवाद उफान पर रहा है। शहरी केंद्रों को आतंकवादी हमलों के लिए सुग्राह्य बनाने वाले कारकों की पहचान कीजिए। इसका मुकाबला करने हेतु प्रभावी उपाय करने के लिए पिछले हमलों से क्या सबक सीखे जा सकते हैं?

Urban terrorism refers to terrorist attacks in urban areas.

eg: 2008 Mumbai attack, Paris Attack in 2017,

A Factors

* High population & population density
→ to make larger impact

* Lifeline of the nation & state
→ urban centres are lifelines - economically & politically
eg: Mumbai, Paris, Tokyo etc.

* Alienated urban youth and radicalisation
→ due to underemployment and unemployment.

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* Greater impact and media coverage in comparison to isolated rural regions.

Lessons to be learned

* Security measures
  → dedicated counter-terror force in urban centres
  → robust intelligence mechanism

* Extremist counselling centres
  → to provide counselling to disgruntled youths

* Drills and community training
  → to prepare the citizens & public beforehand in case of contingency.

* Reasonable & professional media coverage
  → so as to not unnecessarily ~~consiti~~.

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broadcast sensitive issues

→ give away security strategy to terrorists.

Urban terrorism has been rightly described as to 'kill a few & frighten a thousand'.

Hence, necessary measures must be taken to curb this menace.

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10. Despite consistent efforts to contain it, Jammu and Kashmir has witnessed waves of violence since the inception of insurgency in the late 1980s. What, in your opinion, are the causes of persistent violence in the state? Also, suggest measures to improve the situation in the state.

नियंत्रित करने के निरंतर प्रयासों के बावजूद, 1980 के दशक के उत्तरार्ध में उपद्रव (इंसेर्जेंसी) आरंभ होने के बाद से ही जम्मू-कश्मीर हिंसा की लहरों का साक्षी रहा है। आपकी राय में, राज्य में लगातार हिंसा के क्या कारण हैं? साथ ही, राज्य में स्थिति में सुधार के लिए उपाय भी सुझाइए।

Jammu and kashmir is undoubtedly the most troubled state of India.

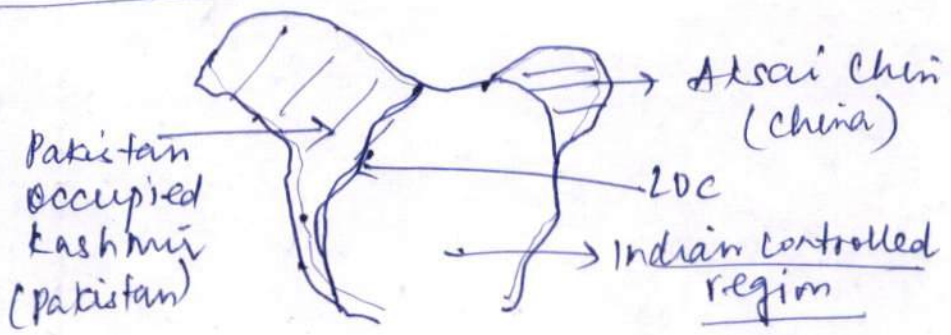

Fig: Jammu & Kashmir

Causes of persistent violence

* External states such as Pakistan & China: who fuel the region with arms & ammunition.

eg: Operation Topac of Pakistan

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* Isolation and lack of development as the region has large minority population → remaining isolated from cultural integration with the rest of the country.

* Separatist leaders and Jihadis : are successful in brainwashing the youths

* lack of investment and economic enterprise - due to hilly terrain and episodes of violence.

* Government's policy failures : Use of pellet guns and harsh laws such as Public Safety Act, AFSPA.

* psychological impact on people who have grown in the area of violence.

Measures to improve

* Investment & development in the region:

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focusing on tourism & agriculture.

* Improving border security as per the recommendation of Madhukar Gupta Committee report.

* Targetted policy measures towards the J&K youth.

eg: Himayat under DDU Gram Kaushal Yojana of Mo Rural Development; Nai Roshni & Nai Manzil for minority youth.

* Ek Bharat, Shrestha Bharat for integrating the youth of J&K with the rest of India.

Gradually, India must work towards equalizing the status of J&K with other states and integration of not only the territory but also its people.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

11. While the National Investigation Agency is emerging as India's premier terror investigating agency, the challenges before it are multipronged. Discuss.

जहां राष्ट्रीय अन्वेषण अभिकरण भारत की प्रमुख आतंक अन्वेषण अभिकरण के रूप में उभर रही है, वहीं इसके समक्ष बहुआयामी चुनौतियां भी हैं। चर्चा कीजिए।

National Investigation Agency is the prime counter-terrorism and intelligence agency conceptualised post 2008 Mumbai Attack.

NIA as premier terror investigating agency

* Terrorism linked investigations are primarily led; especially across the border conflict impacted areas of J&K, Bangladesh borderlands
→ zeroing on the youth radicalised by ISIS, Al Qaida;
→ prevention of proliferation of terrorist activities.

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* Economic investigation related to terror funding, FIN (Fake Indian Currency) Notes and money laundering through international transactions.

eg: Recent investigation on separatist Hurriyat leaders of J&K

However, the challenges before it:

* Centre-State relations: While NIA is under centre, policing & investigation is the domain of state. Hence, cooperation between state agencies are required.
* Lack of coordination: amongst various other investigating agencies and the data they hold. eg: CBI, FIU, ED etc.
* Investigation across international border: eg in Pakistan
* Judicial delays: as most of the cases initiated by NIA remain pending before courts for a long period
* Manpower shortages: to cover up and investigate various incidents & activities all across the vulnerable zones in India.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

* Capability issue : in coming out with fair and impartial investigation in quickest possible time; many cases are under investigation for a long period
* Allegation of misuse : by the centre against the regional parties of state or any dissenting voices.

way out

* Detailed legislation : clearly delineating the power and authority of NIA
* establishment of dedicated fast track courts under the supervision of SC for all terror related activities
* building the capacity and increasing the manpower ; bringing & enhancing technical capability
* Independent committee to select and appoint the NIA chief.

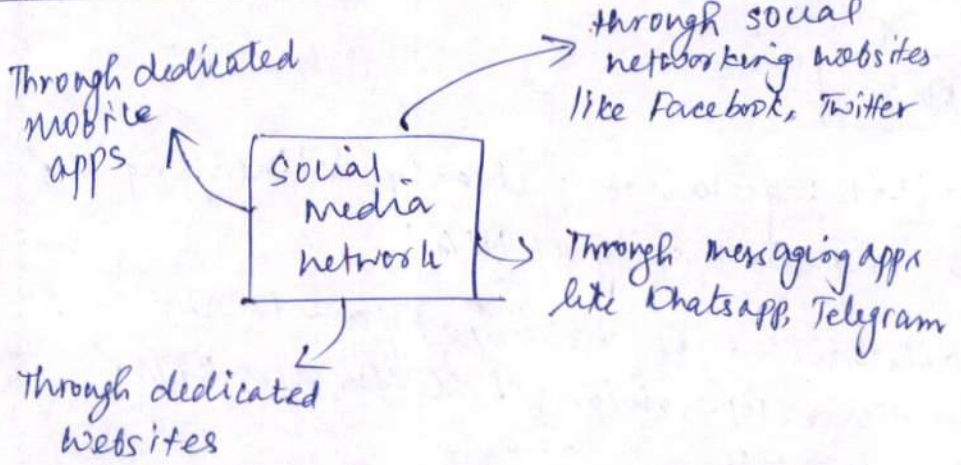
A central investigating agency which is strong, efficient, robust is the need of the hour to prevent attacks like 2008 Mumbai from happening again.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

12. Assess the potential of Social Media Networks for effective policing in India. Also, highlight the reasons behind relatively slow pace of adaptation of social media into policing in India.

भारत में प्रभावी पुलिस व्यवस्था के लिए सोशल मीडिया नेटवर्क की संभाव्यताओं का आकलन कीजिए। साथ ही, भारत में पुलिस व्यवस्था में सोशल मीडिया के अनुकूलन की अपेक्षाकृत धीमी गति के पीछे उत्तरदायी कारणों पर प्रकाश डालिए।

The twitter handle of Mumbai Police is known for its quick responses to public grievances and witty replies and updates.



* Dimension of social media network (SMN)

Potential of SMN for effective policing

* Quicker response : by the police via social media network; saves time during critical incidents → eg: Road accidents
* Easy to interact : through media & texting, saves the hassle of visiting police stations.

Eg: Whatsapp handle run by Delhi Police for Corruption complaints

Don't write anything this margin (इस भाग में कुछ ना लिखें)

* Transparent : as social media complaints are publically visible and fixes accountability on police to perform.

* Real time information : with locations and images ; eg: During flood rescue operations etc, brings in efficiency.

* Public trust and visibility : Confidence building measure by the police through resolution of complaints and grievances on social media platform.

* Dedicated apps & portals for specific complaints : eg: Himmat app by Delhi police on women security.

However, despite the potential and the benefits, there has been slow pace of adaptation because :

* Digital illiteracy : Around 80% of Indians are digitally illiterate as per World Bank, especially in rural areas.

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* Fake and unchecked reporting: social media provides anonymity leading to fake reportings and loss of crucial time by police.

* Privacy issue: as sensitive issues can not be reported on social media platforms.

* cyber capability of police: as police are not trained exclusively on cyber dimension and computer/mobile use.

* Internet penetration: in non-urban areas are very poor

* Behavioural attitude: public trusts police only when formal reporting is done.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. Integrated theatre commands are only one amongst the many steps required for improving the effectiveness of armed forces. Discuss.
एकीकृत थियेटर कमांड सशस्त्र बलों की प्रभावशीलता में सुधार लाने के लिए आवश्यक कई उपायों में से केवल एक उपाय है। चर्चा कीजिए।

Indian Armed Forces are divided into 3 wings:
Army, Navy, Air Force

All 3 wings hold independent command over the various Command zones such as North-West command zone, Eastern Command etc.

Need for Integrated theatre command

* Coherence in the 3 wings → due to integrated and collaborative response of all the 3 wings.
* quick decisions → as the CoAS, CoNS and Co Air force and take collective decision quickly.
* efficiency and scale → to utilise the limited resources from all wings efficiently.

eg: China has an integrated theatre command created over the South-West region that shares boundary with India

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* & integration of Strategic Nuclear Command can also further improve credibility.

However, integrated theatre commands are only one amongst the many steps. There is need to:

* Increase the defence expenditure - as 70% of the equipments are 'vintage' category; CAG has reported on poor war storage capability.
* Reduction in imports and Make in India - as India is the largest importer of defence equipments; DRDO fails to bring the required equipments.
* Psychological and mental boost - through One Rank, One pension; facilities and opportunities to the armed forces
* Technical capabilities - in terms of intelligence and equipments.
  eg: provision of bullet proof jackets in high-conflict zones.
* Improved R&D :- making DRDO, HAL, and OFB efficient in meeting the requirements of the armed forces.

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* Academic integration : capabilities of ISRO, CSIR can be used in making our armed forces robust and more capable; application of Big Data & Artificial Intelligence.

Recently DB Shekatkar Commission had been established to recommend on the improvement and increasing the capabilities of armed forces, which has also highlighted the above mentioned points.

The idea is that
a country sleeps in peace, only when its borders are guarded, and guarded well.

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14. Discussing the applications of the NISAR mission, comment on the need for international collaborations in India's space programme to generate resources and develop expertise.

NISAR मिशन के अनुप्रयोगों पर चर्चा करते हुए, संसाधन जुटाने और विशेषज्ञता विकसित करने के लिए भारत के अंतरिक्ष कार्यक्रम में अंतर्राष्ट्रीय सहयोग की आवश्यकता पर टिप्पणी कीजिए।

NISAR mission refers to NASA-ISRO Apperture Radar mission; a joint collaboration between ISRO (India) and NASA (USA) space agencies.

Applications of NISAR mission

* In space discovery : to use the apperture radar in mapping and locating the inner crux of space bodies
* In archaeology : for discovering under-ground establishments and imaging.

eg: such technology has been used in maping the base of Angkor-Vat temple zone

* In fighting climate change : through comprehensive reading of the polar

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region and glaciers.

* In discovering new planets : NISAR also has ~~also~~ application in its reading & mapping of MARS.

Need for International collaboration

* ISRO is a new organisation - having formally set up only in late 1960s. Hence, technical support and experience of established & old agencies are required.

* Financial constraints of developing countries like India; huge opportunity cost in terms of social spending on health & education.

eg: NY Times & Western media criticism of India spending money on space programs while half of India sleeps without ~~food~~ proper food.

* Technical constraints : such as cryogenic engines. Indian space programs were delayed in 1992 when it failed to get the cryogenic engine technology from Russia.

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* International technology and research such as of manned space program or reusable launch vehicle as by Space X can help India advance its space programs.

* Linkage of space technology on agriculture, education, tackling climate change further mandates the need for international collaboration.

ISRO is aiming for a manned space flight by 2022 and is being proactively supported by NASA for the same.

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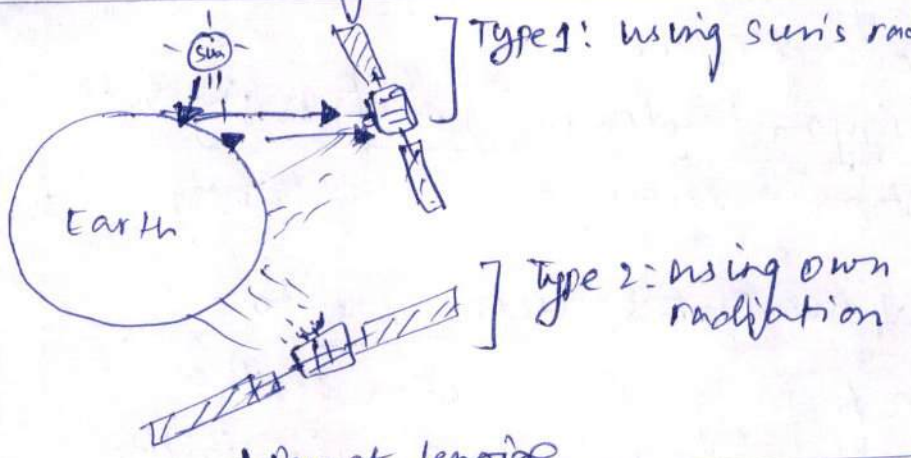
15. Elaborate upon the role of remote sensing technology in the agriculture sector. Also, enumerate various programmes undertaken by the government to leverage remote sensing technology for monitoring agriculture in India.

कृषि क्षेत्रक में सुदूर संवेदन प्रौद्योगिकी की भूमिका का सविस्तार वर्णन कीजिए। साथ ही, भारत में कृषि की निगरानी करने के लिए सुदूर संवेदन प्रौद्योगिकी का लाभ उठाने हेतु सरकार द्वारा आरंभ किए गए विभिन्न कार्यक्रमों को भी सूचीबद्ध कीजिए।

Remote sensing technology refers to mapping of the terrestrial or oceanic region of the earth using a satellite.



Remote sensing

Role of remote sensing in agriculture:

* Precision farming: by assessing the type and quality of land, the type of crop optimal on the land etc.

* Insurance mechanism: in quickly assessing the crop loss and remuneration to the farmers. eg: In PM Fasal Bima Yojana

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* weather forecasts : by the remote sensing technology can help farmers in adopting the required measures. eg: IMD forecasts

Eg: 55% of cropped area in India is rain-dependent; a 'gamble in monsoon'.

* Technical inputs : such as nearest ~~[illegible]~~ agriculture market, connectivity via the satellites.
Krishi Vigyan kendras (by ~~CSIR~~ ICAR) using such information to enhance productivity.

* optimal use of resources due to precision farming, information on the geology and market, water availibility etc.

* Monitoring farming and data collection for agricultural research by ICAR; direct transmission to farmers ~~by~~ via mobile connectivity.

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Various programs:

* BHUVAN portal : ISRO + Ministry of Agriculture to assess the farming land and agriculture via a dedicated satellite and dissemination of information via Bhuvan portal

* Charan portal : for horticulture product assessment via remote sensing

* PUSA - Krishi app and other innovative web portals and apps to direct technical innovations to farm lands.

Technology and space research is a major pillar when it comes to "doubling farmer's income by 2022."

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16. Defining superbugs, assess why India is particularly vulnerable to them. Also, suggest measures that can be taken to deal with the threat of superbugs in India.

सुपरबग को परिभाषित करते हुए, मूल्यांकन कीजिए कि भारत इनके प्रति विशेष रूप से सुभेद्य क्यों है। साथ ही, भारत में सुपरबग के खतरे से निपटने के लिए किए जा सकने वाले उपाय भी सुझाइए।

Superbugs refers to micro organisms such as bacteria, viruses and protozoa that has become immune to a large set of drugs and medicines that were once used to eliminate it.

Vulnerable India

* Poor sanitation and hygiene leads to constant exposure to myriad bacterias & viruses.

* overuse of drugs : such as anti-biotics leads to emergence of immunity
  ↳ easy availability of drugs
  ↳ self-medication

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* huge population ~~→ makes~~ and population density → in certain districts, it is as much as 1500 to 1900 persons / km^2.

* poor health cadre → emergence of fake doctors ~~are~~ and reliance on quakes in rural areas.

* poor health infrastructure → leads to various hospital acquired diseases and constant exposures

* zoonosis → where large animal population already helps in creating superbugs and then transmitting it to humans.

* migration: both inter country and intra country helps in spread of superbugs.

Measures taken

* Policy guidelines on Anti-microbial resistance → both by Ministry of Health and WHO.

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* Red line campaign -> to strict the use of anti-biotics

* strict enforcement of schedule H & schedule X drugs guidelines.

* campaign for awareness with support from various NGOs, through media advertisements.

Measures that can be taken

* Medical guidelines to doctors for restrictive prescription of anti-biotics

* Mandatory prescription for purchase of drugs

* WASH (Washing, sanitation & Hygience) practices in schools and in daily activities

* elimination of open defecation.

superbugs is a global medical emergency which needs a collaborative approach and measures on war footing to be tackled.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. Despite its associated risks, nanotechnology offers many advantages to improve upon existing technologies to tackle air, water, and soil pollution. Analyse.

अपने संबंधित जोखिमों के बावजूद, नैनो प्रौद्योगिकी वायु, जल और मृदा प्रदूषण से निपटने के लिए वर्तमान प्रौद्योगिकियों में सुधार लाने के कई सुअवसर भी प्रदान करती है। विश्लेषण कीजिए।

Nanotechnology refers to such technologies which harness the potential of nano-size ($10^{-9}m$).

Associated risk

* small sizes of particles, units & equipments → make them vulnerable to inhalation → causing lungs & breathing related problems

* Experiment failures may lead to negative consequences on human health as it is difficult to locate nano particles.

However, it offers many advantages:

Tackling Air Pollution

* At source : in incinerators and exhaust cyllinders → nano particles are

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used for reaction and absorption of harmful gases, such as CO, SO_2 etc.

→ In curbing vehicular emissions through efficient combustion and development of eco-friendly fuels.

* In open ; Nano-particles are being experimented with their ability to form collusion with pollutants.

Tackling Water pollution

* In cleaning of water - through interaction with germs and micro-organisms. Eg: Aid to Chlorine cleancing etc.
* In making water potable ; reducing water contamination such as Arsenic, fluoride etc. ; through dedicated targetting
* In water treatment at industrial source ; tackling oil spills alongwith bacteria.

Tackling soil pollution

* for channelised reaction with soil contaminants ; not impacting other small plants

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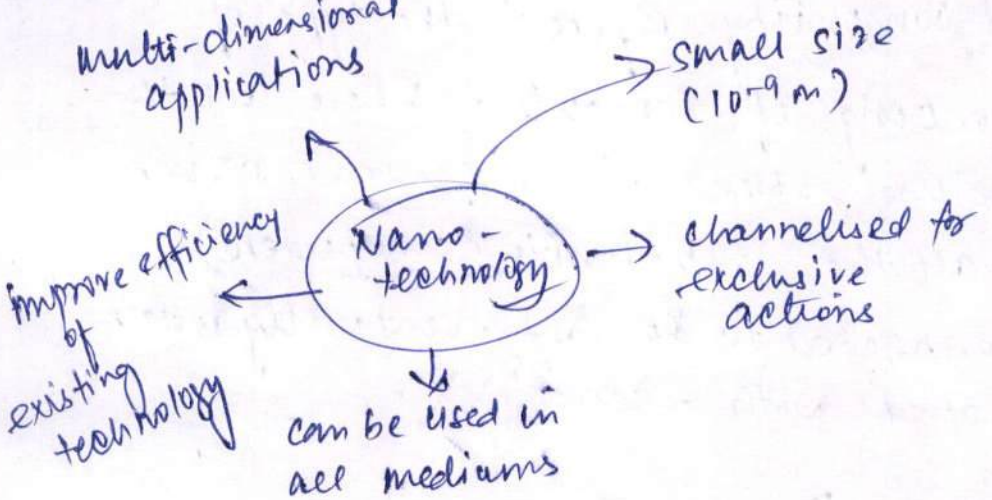
* For curbing over-use of fertilisers and its negative impact on the soil quality.

* For remediation of solid wastes, complementing bio-remediation.



hence, holding the potential to add on to the existing technologies.

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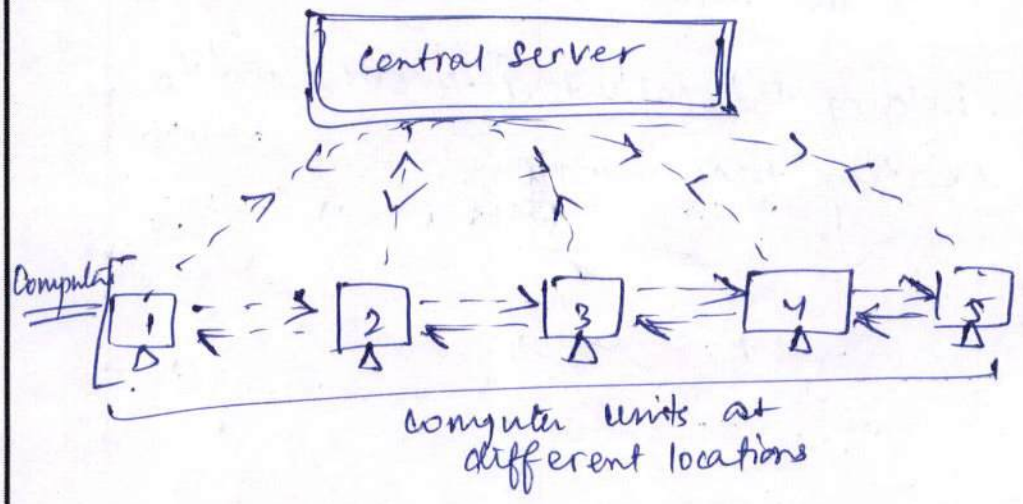
18. What is cloud computing? With examples, identify how it can improve the quality of governance. Also, suggest some measures that can be deployed to counter the security risks that may arise.

क्लाउड कंप्यूटिंग क्या है? उदाहरणों के साथ, पहचान कीजिए कि यह शासन की गुणवत्ता कैसे सुधार सकता है। साथ ही, इसके द्वारा व्युत्पन्न हो सकने वाले सुरक्षा जोखिमों का सामना करने के लिए अपनाये जाने वाले कुछ उपाय भी सुझाइए।

Cloud computing refers to the type of networking of computers where all the datas are stored in a central server and all the sub-units (computers) are connected to it and eventually inter-connected with each other.



Hence, a file ~~can~~ stored in unit 1 can be accessed from unit 5, and any change made will be reflected in all the units.

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Ways it can improve governance quality

* time saving and quick service

eg: Any file created in the initial phase will be accessible to subsequent officers in real time; no separate forwarding of file

* Real time data availibility to all officers

eg: PRAGATI model of Indian government where real time updates on various government schemes are channelled to both state level officers, central officers & PMO.

* Brings transparency and accountability

eg: As it can highlight the level at which the work on a file or project has stopped.

* cuts down on red-tapism

eg: As files do not have to manually be transferred

* interconnects departments & officers bringing efficiency

eg: Magistrate can enquire and access the data on law & orda, education through

Don't write anything this margin (इस भाग में कुछ ना लिखें)

his computer alone.

However, such inter-connectivity possess risks.

Some ~~ki~~ risks and measures:

* Risk: cyber-attack may cripple the entire platform

* Sol: → Intra-net exclusive for a particular regional governance can be created
→ dedicated bot/malware assessment and regular software upgradation.

* Risk: → wrong changes in file by one unit will be reflected in all units

Sol → back up of files can be created to revert back
→ second layer of checking before the editing in files are saved.

Maharashtra has become the first state to adopt ~~a~~ comprehensive State Cloud Computing policy.

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19. Delineate objectives and services linked with Technology and Innovation Support Centers (TISC) program of the WIPO. Also, highlight steps taken by India in this context with special emphasis on IPR awareness.

WIPO के प्रौद्योगिकी और नवाचार सहायता केंद्र (टेक्नोलॉजी एंड इनोवेशन सपोर्ट सेंटर्स: TISC) कार्यक्रम से जुड़े उद्देश्यों और सेवाओं का वर्णन कीजिए। साथ ही, IPR जागरूकता पर विशेष बल के साथ इस संदर्भ में भारत द्वारा उठाए गए कदमों पर प्रकाश डालिए।

WIPO is a specialised agency of the United Nations, catering to:

- Intellectual property safeguards
- Policies & support to developing nations
- Collective approach to property rights

TISC program

* Objectives

→ to create a robust & comprehensive intellectual property environment globally

→ to promote innovations and research

→ to support developing nations in building a robust IPR framework

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→ to provide startups access to IPR through state channels.

* Services

→ support financially and technically to developing nations

→ provide incentive to industries to go for IPR support

→ generate awareness through campaigns & negotiations

Steps by India

* IPR policy 2016 by India highlighting the legislative framework and guidelines towards IPR.

* IPR promotion cell under DIPP in Ministry of Commerce & Industry as nodal agency to promote IPR and

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take forwards the idea of "Creative India, innovative India".

* Amendment in legislations such as Patents Act to meet the IPR guidelines of WTO.

Innovation can drive the economy only when such innovations are incentivised and supported. Hence, a comprehensive and strengthened IPR framework becomes necessary.

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20. Discuss the significance of polar research and India's contribution in this regard.

ध्रुवीय शोध के महत्व और इस संबंध में भारत के योगदान की चर्चा कीजिए।

Polar regions of the Earth are still ~~inhabitated~~ not inhabited and offers a prime location for research on Earth in its natural environment

Significance of polar research

* Idea of human origin and survival on earth
* Life in cryogenic environment
  eg: Svalbard Seed Bank in Arctic etc
* Information on climate change and melting of polar regions
  ↳ impacting the policy decisions globally

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* Impact of anthropogenic factors on earth's environment via comparison with polar environment

* Discovery of medicines ~~are~~ and biological ~~factors~~ organisms in low temperature environment.

* Studying weather phenomena

India's contribution

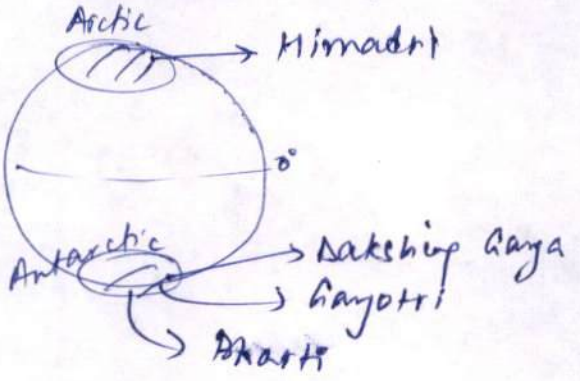

Fig: India's research centres

* has established various research centres

* worked actively in creating reports on climate change & impact of pollution.

* scientific discoveries of organisms & ~~and~~ medicines in polar climate.

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Pursuance of scientific innovation is the fundamental aspect of India's endeavours, being implemented through such research centres.

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GENERAL STUDIES (TEST CODE : 1072)

Name of Candidate	KUMAR ANURAG		
Medium Hindi/Eng.	ENG	Registration Number	26074
Center	ORN	Date	23/9/18

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
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14	15	
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16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

Signature of Examiner

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
2. There are TWENTY questions printed in **ENGLISH**.
3. All questions are compulsory.
4. The number of marks carried by a question/part is indicated against it.
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
6. Word limit in questions, if specified, should be adhered to.
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Explain why it is important to urgently address the problem of poor land records and infirmity of land titles in India. Also discuss how this problem can be addressed. 3.Sch **(150 Words) 10**

Land has multi-dimensional aspect in the functioning of the economy - as an asset, as a source of revenue and also as a source of production.

Challenge of poor land records in India

* colonial heritage of Zamindari system has led to unrecorded ownership
* poor infrastructural capacity post Independence has led to keeping of unmaintained records

Need to address the problem

Economic loss

1. Land can not be used as an asset / collateral for borrowing / transaction
2. Land being a vital capital is locked up in litigation
3. Rise in the land prices, especially the shadow prices of the land
4. Impacts ease of doing business adversely
5. Agricultural sector faces issues due to locked up land, fragmentation of land

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Social loss

① land often becomes the source of contention and riots, violence in the society

② corruption and exploitation by the officers over the ambiguous land records

③ usually the minorities & vulnerable section faces the brunt of poor land record.

Solving the problem

* Digital land titling : to maintain an uniform record
* use of satellite mapping as advocated by Economic survey 2016-17
* Blockchain technology to update the land record
* fast track courts to solve the ongoing land disputes on urgent basis

Government has taken various initiatives such as Digital India to cater to the digitisation of land records.

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2. (1) What are the special features of the infrastructure sector that make its financing a challenge? (2) What measures have been taken to facilitate adequate amount of finance to this sector? **(150 Words) 10**

Rakesh Judge Ahluwalia committee had highlighted the need of ₹40 trillion for infrastructural development of India.

Challenges in financing infrastructure sector

*Economic factors

1. Heavy fixed capital is needed
2. long gestation period
3. High risk associated in the projects due to Inflation, exchange rate volatility and business environment
4. Heavy machinery required, at times unviable in developing nations

*Social factors

1. Land acquisition and rehabilitation in large infrastructure projects
2. Social Impact Assessments add up to the cost of financing infrastructure

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* Other

① Environmental Accounting also add up to the cost

Measures taken

① Invits and REITS are issued to pool the finances for infrastructure

② National Infrastructure Investment fund has been established

③ Governmental policies such as:

- Resolving NPAs through 4R & IBC
- Disinvestment → National Investment Fund

④ Money channelising through:

- SIDBI
- IDBI banks.

⑤ PPP : relaxed norms of FDI and high involvement through HAM model etc.

It is rightly said that If you travel by rail and road, but economists travel by infrastructure.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. (1) Despite favourable circumstances, India's electronics manufacturing has been unable to respond to the rising demand. Discuss. What steps can be taken to address this situation? (2) (150 Words) 10

Economic Survey has highlighted that at the current rate of imports, by 2025, Electronic imports will over take oil & gas imports of India.

Favourable circumstances

1. large market (1.2 billion consumer)
2. open and growing economy (~7.2% p.a)
3. cheap labour
4. favourable government policies such as SEZ, NIMZ

Yet, demand is not met.

Challenges to electronics manufacturing

1. cheaper imports from China - distorts the domestic production in India
2. Inverted Duty structure for electronic raw materials such as chips, IDEM.

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③ Higher cost of production – due to constraints as highlighted in the Ease of Doing Business report 2017
→ electricity → labour regulation → transportation

④ Technological issues in terms of early design and innovation

⑤ Digital transformation in the economy has also pushed demand rising exponentially.

Steps that can be taken

① Rationalising the tariff structure

② Countervailing & Anti-dumping measures against Chinese imports

③ Facilitating Ease of Doing Business in India through Made in India

CASE: Recently, Samsung's largest plant was inaugurated in Noida by PM Moon Jae In & Narendra Modi

④ Rationalising labour laws; Special Economic Zone.

Electronics is the fuel for 21st century growth.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Despite registering a high growth rate in the post-reform era, India continues to witness a high incidence of poverty. Explain this paradox and suggest ways to resolve it. **(150 Words) 10**

The paradox of high growth rate and high poverty has been widely discussed by Amartya Sen in Uncertain Glory and has often been known as Sen-Bhagwati debate. An average growth rate of ~4% post independence marked with poverty rate of 21% as per Census 2011 (Tendulkar committee) and 51% of multi-dimensional poverty.

CAUSE for such paradox

Growth Pattern
① Strategy of unbalanced growth - Mahalanobis model adopted post Independence
② Top-down approach with heavy focus on industrialisation during early planning period

Economic Reforms
① Green Revolution was not equitable in terms of return
② 1991 LPG reforms drove the services sector, while Agricultural sector lagged (employing 58% of the workforce)

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Policy Approach
- ① Poverty alleviation measures were adopted in silos and a coherent strategy was missing.
- ② Agricultural distress persists - such as irrigation network of only 45%, fragmented land
- ③ Human capital (education & Health) also lags behind in terms of quality and investment.

Resolving the paradox

Inclusive growth
- → Agricultural driven focus such as doubling farmer's income
- → doubling investment in education (6% of GDP) and health (4% of GDP)
- → Encouraging gender mix in workforce participation

Policy Approach
- → Targetted approach. eg: 115 Aspirational District program of NITI Aayog
- → Rural development through skilling, SHGs and financial inclusion.

A poverty free India is a new India.

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5. In light of the argument that India has entered a regime of "permanent surpluses", discuss whether the time has come to remove agricultural commodities completely from Essential Commodities Act. (150 Words) 10

India had met with the highest production of food - 174 mt and even higher of horticulture production. The argument of permanent surplus revolves around:

* high production
* Agricultural trade surplus
* largest producers of milk, groundnut, pulses, wheat etc.

* Despite production, agricultural distress persists as market pricing are being constrained by Essential commodities Act.

Removing Agriculture from ECA

* constraints large bulk buyers from storing and holding grains
* inhibits exports of agri products
* limits farmers income with non-realisation of market price.

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* Major bulk buyers keep off from agri-transactions
* Other avenues such as Contract Farming are largely not exploited
* Excessive production leads to glut in the market, Cobweb model predicts about limited production next year.

CASE: * Ashok Antati as well as Dalwai Committee have recommended about removal of products from ECA.

Challenges & solutions

* While the step would be pro-farmer, inflation would be anti-consumer.
* Might lead to excessive exports, limiting food availability in domestic market.

Thus, a cohesive and comprehensive approach is needed that checks into malpractices while allowing the market forces to work.

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6. The 1988 National Forest Policy (NFP) was visionary in its scope and ambition. However, there is a need for a new forest policy in the current context. Discuss. (3) Sch. **(150 Words) 10**

1988 National Forest Policy was initiated to meet the objective of sustainable development and inclusive growth. It catered to:

* the rights of the forest dwellers
* respect for the wildlife habitat & forest natural resources
* aim for increasing the forest cover to 33% of the area.

However, with changing times, consumption pattern and market demands, there is a need for a new forest policy:

* Climate change: appeared as a major threat to the globalised world
* rampant deforestation and degradation, 33% of the area is degraded wasteland
* wild-human conflict due to encroachment in the forest area

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* better allocation of forest rights are needed between the dwellers & outsiders
* forests have come up as a natural solution to mitigating disaster impacts
* Afforestation to be the tool rather than just checking deforestation
* Rampant rise in forest fires also demands a relook in the policy.

It is through the NFP that the government can meet its INDC target and mitigate the negative consequences of climate change. Initiatives such as:

* Forest Surveys
* CAMPA
* National Green Highway mission are the steps in the right direction.

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7. How does rapid urbanization increases the vulnerability to major disasters? Explaining with examples, suggest measures to develop disaster-resilient cities. (150 Words) 10

Urban sprawl and unplanned development has been termed as the major source for aggravated impact of natural disasters.

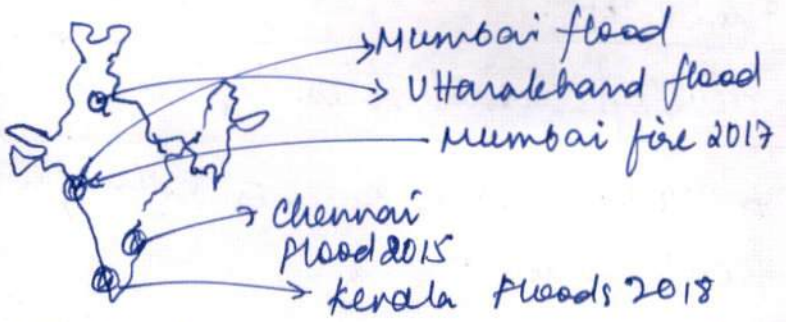

Fig: Disasters aggravated by Urbanisation

How urbanisation increases vulnerability?

* Population density : larger chunk of people impacted in a small area
* Urban pattern of consumption : leads to choking of drainages and encroachment of lakes, wetlands. Thus, takes away the natural absorbers of floods.
* Deforestation : limits the ability to check wind, water during storms. leads to erosion and silting of river basins.

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* Encroachment : on flood plains makes people vulnerable to river level rise.
eg: Kerala floods, 2018.
* cementation : limits groundwater recharge
* Infrastructure : increases casualties during earthquake.
eg: Nepal quake 2015.

Measures to develop disaster resilient cities

* Planning : to avoid encroachments on forest, wet lands, flood plains.
* Decentralisation : of disaster preparation and mitigation
* Technology : to augment infrastructure capabilities. eg: Japan's infrastructure is both earthquake & Tsunami resistant.
* community participation : through drills & trainings. eg: Japan, South-East Asian nations.

Sendai Framework 2015-30 talks about understanding the risk, vulnerability mapping and then building the capacity to mitigate the disaster.

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8. (1) Explain DNA profiling and (2) highlight its forensic application. Also (3) discuss the significance of DNA Technology (Use and Application) Regulation Bill, 2018 in this regard. **(150 Words) 10**

DNA profiling refers to storing the DNA mapping of an individual in a data bank and then using such data banks to identify criminals & individuals as the need arises.

Its forensic application:

* as the DNA mapping is unique to individuals, it has high success rate in identifying criminals in crime scene.
* can trace the pedigree and hereditary lineage of individual
* can help in identifying missing children and dead bodies.

DNA Technology Bill, 2018 was introduced recently to legalise DNA profiling to aid police and criminal investigation.

Its significance lies in:

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* correct identification with limited human error
* quicker investigation and judicial procedures
* can strengthen the policing capabilities and deter criminals who are once recorded in the profiling data base
* can help the state to identify missing individuals and dead bodies.

However, it throws various challenges to;
* State profiling individuals on the basis of their genetic makeup
* possibility of racialism and discrimination. eg: Aryan theory
* Against the Article 21 of constitution that guarantees Right to life involving ownership of the genes & DNA to the individual.

While DNA profiling will aid the state capacity, a regulation & check is must.

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9. What is meant by the term Blue Water Capabilities? In this context, identify the key measures that have been undertaken to enhance the blue water capabilities of the Indian Navy. (150 Words) 10

Blue water Capabilities refers to the ability and strength of a naval force to command not only the region of its territorial water but also regions of high seas and international waters.

CASE: US Naval Forces have the strongest Blue water capabilities with maximum number of aircraft carrier

The key measures to enhance Blue water capabilities of Indian navy are:

* Military (navy) exercises: such as Malabar exercise, MIMPAC etc
* IONS: Indian Ocean Naval Symposium with other Indian ocean nations to strengthen cooperation
* Inducting and rebuilding Aircraft carriers such as INS Vikrant in making.
* Submarine capabilities such as: INS

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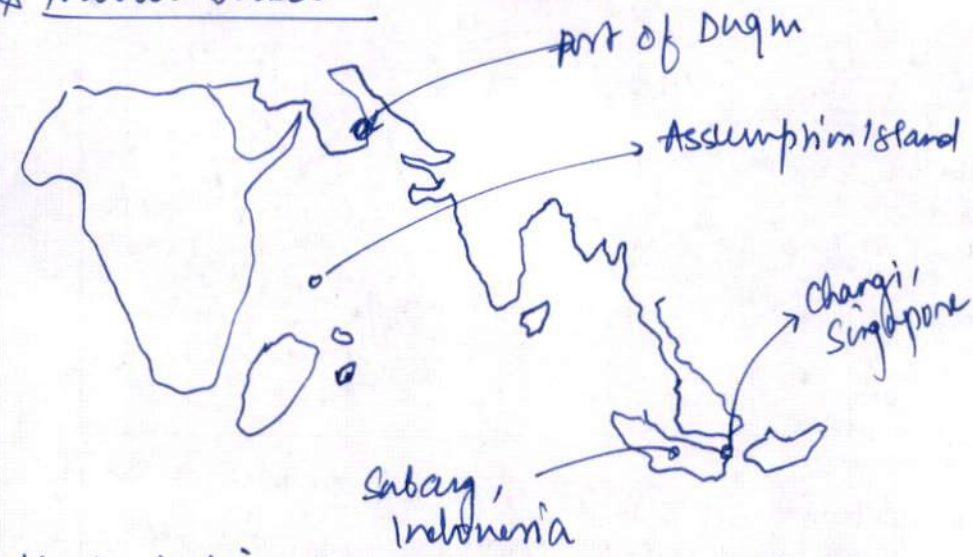
Arihant developed indigeneously, scorpene leches

* Naval bases



that India has negotiated to allow navy operability.

* agreements such as LEMOA, BECA and COMCASA with USA.

* largest naval base along Karnataka coast

India has 7500 km long coastline and ~~sea~~ peace at sea is the only way out to peace in the nation.

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10. Identify the factors that make India vulnerable to drug trafficking? Also discuss the key steps taken to deal with it in our country. **(150 Words) 10**

As per UNODC report, more than 30% of the Indian youth are involved in some form of drug consumption.

Factors that make India vulnerable:

* International actors:

Flow of drugs from drug hotspots

* High youth population: terms creating the market
* Unemployment and academic pressure; performance pressure at work
* easy availability and
* Involvement of police machinery.
  eg: Punjab drug case.

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Key steps taken:

* Narcotics Drugs and Psychotropic Substance Act was initiated that made:
  - ↳ drug consumption a criminal offence
  - ↳ drug possession a criminal offence
* International negotiations and agreements such as single convention of Narcotic Drugs, 1951
* Drug Bureau to check the manufacturing, sale and illicit wealth generated out of such activities.
* Scheduling of medicinal drugs → H, X to limit the supply (regulation).

CASE: Movie such as Udta Punjab is a community led approach to raise awareness about the menace.

Solution lies in accepting drug abuse as an issue rather than crime, initiating rehabilitation and social acceptance of the issue.

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11. (i) How do higher global crude oil prices affect the Indian economy? (ii) What steps can be taken to gradually insulate India from global oil price volatility in the long term? **(250 Words) 15**

While India has 0.75% share of natural oil & gas reserves, it houses 17% of the world population – leading to a great mismatch in demand and supply, higher imports and vulnerability.

Global crude oil prices affecting Indian economy

* Nomura as well as Economic Survey 2017-18 has pointed that:
  Every $10 increase in oil prices lead to
  → ~1% rise in Inflation
  → ~0.3% fall in GDP
  → ~0.7% ↑ in CAD.

* Inflation: hits the consumers hard as oil is the basic raw input for transportation, manufacturing and Industries.

* Current Account Deficit: widens as higher prices for imports are paid; leads to depletion of foreign Exchange Reserve.

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* Lowers investment : in the economy as
  1. RBI raises interest rate to counter inflation
  2. Inflation diminishes 'animal spirit' of investment in private sector

* Hits agriculture : dependent on diesel motors for pumping

* lower export : as production loses their competitiveness due to higher input cost.

Long term solution to oil price volatility

Diversification
- → 1. of its trade sources such as USA, Middle East, Africa, Central Asia
- → energy mix between oil & gas; focussing on crude to strengthen its refinery capacity

Renewables
- → shift to renewable energy; Target of 175GW by 2022
- → National Biofuel Policy 2017 to look for alternatives

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Mobility → promotion of e-vehicles and hybrid vehicles
→ Impetus on public transport

Reserves → maintaining strategic reserves to smoothen fluctuations
→ to bring domestic price stability

CASE: Economists have rightly said about oil that their is either too much of it, or too little of it all the time.

Explorations → of other alternatives such as coal bed methane, shale gas reserves.

With rapidly growing economy, per-capita energy consumption of India is increasing. Thus, adopting long-term measures is in India's strategic interest.

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12. Critically discuss the role of private sector in skill development in India in recent years. In this context, what are the measures required to improve oversight as well as financing in the skill development sector? (250 Words) 15

Institutions such as ILO and World Bank have highlighted the 'unskilled India' issue with around 70% of the graduates unfit for skilled jobs. Keeping this in view government had initiated various schemes/initiatives

* PM Kaushal Vikas Yojana
* Ministry of Skill Development & Entrepreneurship
* National Skill Development Corporation

Along with the private participation.

Role of private sectors in skill development

* Positives

(1) Sector Skill Council (SSC) are instituted with the involvement of industries that have the responsibility of training and placements as per industry demand.

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(2) ITIs and Polytechnique institutions are run by private bodies

(3) Funding and skilling pattern

Govt. → NSDC → SSC → Polytechnique, ITIs → Placements

involvement of private sector in executing and implementing the scheme

* Negatives

Sharda Prashad committee has highly criticised the SSCs and labelled them as hot bed of corruption.

(1) limited accountability and conflict of interest in SSC management

(2) low placement - as low as 17% was noted by the committee

(3) industry demand and skill supply mismatch

(4) Poor quality of training as the focus

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is on achieving the target rather than quality.

(5) lack of trainers.

Measures required

(1) consolidation of SSCs as recommended

(2) Strict adherence to Skill Quality Framework

(3) National regulator to be setup for the skilling institutes

(4) Financing pattern to be based on placement rate and outcomes rather than numbers of skills imparted

Education, Health and skills are the quintessentials for a 'New India' and for the nation to reap its demographic dividend.

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13. (1) The e-commerce sector has been booming in India for the last few years. (2) Examine the need for its regulation in light of the recently proposed draft e-commerce policy. Further, (3) identify the challenges that the sector is currently facing. **(250 Words) 15**

Acquisition of Flipkart by Walmart highlights the scale of operations of e-commerce in India - the deal alone is worth $18 billion.

Reasons for booming e-commerce

- Internet penetration has increased; 420 million Indians under Internet connectivity
- Smart phone penetration increasing
- Less cash economy transition

In order to cater to the changing market structure, need has arose to regulate e-commerce via e-commerce policy because

* E-commerce has become billion dollar industry with strong ~~posi~~ forward and backward linkage.

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* legislations such as Consumer protection Act do not cover the protection under e-commerce
* e-commerce as intermidiaries in (market model, B2B model) have limited accountability
* Data colonisation as e-commerce platforms accumulate large amount of private data
* Privacy issue due to no data protection framework yet in India
* Rapid growth in connectivity in rural areas have made the region vulnerable to online frauds and scams.
* Monopolisation of the ecommerce market is also happening with only limited participants dominating it.

Thus, a policy guiding the market has become necessary.

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Challenges faced

* Financial

① especially startups heavily relying on venture capitals & Angel Funds - which are situational and limited

② limited asset as collaterals as majority are market models.

* Structural

① limited internet penetration and digital literacy keeps the demand constrained

② logistics in India is constrained by poor road & rail connectivity, especially in rural and remote areas.

* Economical

① market dominance by few big players

② FDI is restrained in inventory based model.

e-commerce holds key to future Indian economic growth with rising literacy and internet connectivity.

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14. Explaining the importance, highlight the achievements of dairy sector in India. Examine whether over-production is the reason for the problems being faced by the dairy industry. Give some solutions to address the problems. **(250 Words) 15**

Dairy sector is one of the most important agro-based sector. It holds immense importance:

* provides income-security to farmers
* provides raw materials for agricultural produces (eg: manures)
* caters to food security issue
* forward linkages to food processing sector

Achievements of Dairy Sector

* Operation Flood has led to creation of various successful Cooperatives:
  - ↳ gender equality in workforce
  - ↳ income & financial security to farmers
  - ↳ rural development

  eg: AMUL in Gujarat, Mother Dairy in NCR

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* India has become the largest producer of milk in the world

* Various breeds of cattle are being domesticated, with India having around 350 million of them.

Examining the problem

* Overproduction
  - Proliferation of cooperatives have led to glut in the market in some regions.
  - Competition among producers has increased.
    eg: Amul, Mother Dairy in North-West; Sudha in Bihar region.
  - Lesser price results in losses and shutting down of cooperatives.

* Quality Issues as sanitary measures are important for the sector

* limited food processing and usually direct sale limits the potential.

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* Value added products such as Rabris, Sweets, Paneer are not being derived and focused upon - limiting the potential
* limited to negative dairy exports.

Addressing the problem:

* Diversification of dairy production across various geographic regions
* linking with Cold storages & Mega food parks (SAMPADA scheme) for food processing
* Investing in MSMEs and start ups through MUDRA for milk derived products and exports through APEDA.
* Negotiations in WTO to ease sanitary and Phyto sanitary measures.

Ashok Dalwai committee has recommended dairy sector as the major link towards doubling farmers income -

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15. There has been a focus on Textile and Apparels industry in India in recent years. Elaborate the potential of this industry and the challenges that lie in achieving it. What steps have been taken in this regard? **(250 Words) 15**

Textile and Apparels industry has been at the centre of Economic Survey and Budget discussion due to the various potential it holds.

* Economic potential

① Labour intensive Industry ; largest share of employment offered outside agriculture and construction

② Export potential : Already consists around 15% of the exports; meets the apparel demands & fashion of western world

③ GDP growth : contributes roughly 5% of GDP

* Social potential

① Inclusive growth : as women labour force is high in such sector

② cottage industry : possible in handspun textiles, such as khadi industry

③ reduction in unemployment and social unrest : as the sector has very high

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employment elasticity.

* Other factors: ① environment friendly sector
② high market and consumer demand
③ Raw materials are available - thus strong forward and backward linkage
eg: cotton → processing → product
④ can meet the fashion needs of the world

Challenges that lies in achieving potential:

* Structural challenges: ① handloom industries are not productive
② Economic survey has highlighted about their obsolete machinery dependence
③ credit financing of textile MSMEs are also low - tripple bind problem as highlighted by Sebastin Morris

* External issues: ① stiff competition from Bangladesh and Vietnam in capturing market offered by China's withdrawal
② Quality and cost comparision with other nations

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* Infra Issues ① logistics and connectivity for trade - highlighted in poor Ease of Doing Business report

② Stringent labour laws in powered sector, i.e. capital intensive mills.

Steps taken:

① ATUF Scheme (Amended Technology Utilisation Fund Scheme) → provides financing capital in Textile sector

② Ministry of Textiles launched PowerTex for capital intensive sector

③ Increased funding to Textile MSMEs in last 2 budget → warehouse receipts → MUDRA financing

④ promotion of Khadi through KVIC

India holds comparative advantage in textiles as per Standard Trade Model. It must capitalise on the opportunity and tap the potential.

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16. How do transportation corridors in biodiversity rich areas impact the wildlife? Examine the current policy framework in this regard. Also, suggest measures to minimise the negative effects while balancing the need for development. **(250 Words) 15**

Transportation corridors in biodiversity rich areas refer to the networks of highways and railway lines transversing through them.

eg: Rail lines and highways through Jim Corbett region.

How do transportation corridors impact:

* Man-animal conflict : poses a threat to both man and wildlife
* destroys habitat : through deforestation and encroachment for corridor
* Increases vulnerability : through noise and air pollution
* Increases mortality : incidents of train hitting elephants, animals getting trapped in electricity line.

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* movement of animals into human settlements

Current Policy framework:

* Environment ~~protection~~ Impact Assessment: to assess the environmental impact of such corridors.
* National Wildlife Action Plan (2017-30): : sets guideline on construction activities in wildlife area
* Policy guidelines by Ministry of Environment: to minimise man-animal conflict; promotion of non-lethal measures and transport corridors construction

Frame work:
- lethal measures → caging, tranquilisers; → trapping
- non-lethal measures → transport corridors, sensitising & awareness

Measures to minimise the negative impact:

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* Impact assessments - to initiate developmental projects in regions of least vulnerability
* Transport corridors - for wild animals
eg: Elephant corridors connecting MIKES, Tadoba - Andheri corridor
* Sound-barriers along transportation routes
* fencing of train routes
* sensitisation and participation of local communities
* compensatory afforestation, CSR funds to corporate Environment Responsibility.

As the world moves towards sixth Major mass extinction, it is imperative to build on the requisite to capability to meet the goals of sustainable development.

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17. The potential of technology to aid farmers in increasing productivity as well reducing susceptibility to climate change remains underutilized. Identify the reasons for the same and suggest measures to improve technological penetration in agriculture. **(250 Words) 15**

The potential of technology to aid farmers lies in:

* optimising Inputs - precision farming - through satellites & sensors
* Insurance coverage - drone & satellite assessment → PM Fasal Bima Yojana
* Optimal data - from IMD & ISRO → Bhuvan app
* Quality of inputs - through research → Soil Health Card
* Green farming - solar & wind energy → KISHTI & KUSUM

However,

Technology potential remains underutilized:

* Social factors
  1. farmer illiteracy and lack of awareness
  2. non-inclusion of farmers all across the nation
* Infra issues
  1. electricity and data connectivity not available.

eg: only 40% internet penetration in India as per WB WDR 2016.

2. Time lag in information delivery through Common Service Centres, weather related

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info.

* Social Inertia ① lack of technology acceptance
② lack of funds to implement it on large scale

~~Identifying the reasons?~~

③ time lag in adjustment to smart technologies such as internet based data dissemination.
④ land fragmentation & intensive agriculture

Such reasons have led to technology potential remaining unutilised as:

* around 20,000 farmers death were reported in previous years
* farm productivity has been falling
* Economic survey has pointed to loss of around $20 billion annually due to climate change in agri sector.
* farm distress due to sub-optimal production
* Krishi Vigyan Kendras and other initiatives such as NICRA have not materialised

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on ground.

CASE: Ashok Dalwai committee recommended heavy use of technology in ailing farm sector.

Measures to improve tech. penetration:

* Economic measures ① increase in funding to technology related schemes such as Bhuvan app, e-NAM.
② Incentive to farmers in shifting to technology friendly initiatives

* Infrastructural measures: ① National optics Fiber Network
② Digital India linkage with agri sector
③ Provision of electricity under DDU Gram Jyoti Yojana, saubhagya scheme

* social measures: ① Digital literacy through Digital Sakshanta Abhyan
② Active involvement of scientists, celebrities and local politicians to encourage technology use.

Technology holds the potential to transform agri sector and double farmers income.

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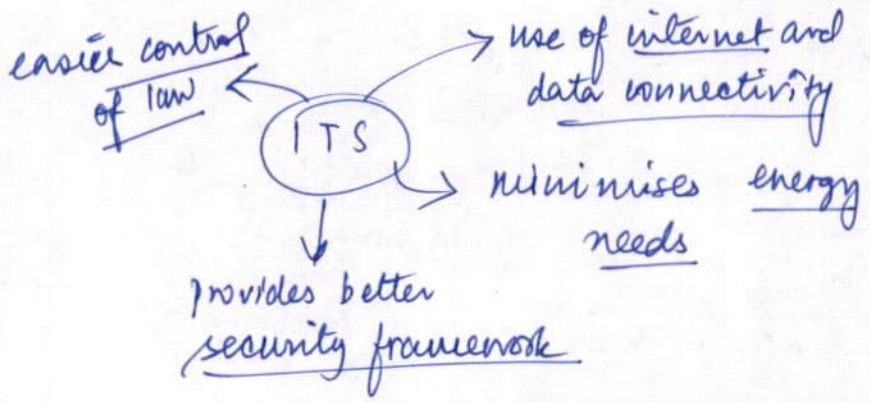
18. What is Intelligent Transportation System (ITS)? Explaining the need of ITS in India, identify the challenges in deploying it. **(250 Words) 15**

Intelligent Transportation System refers to integration of ICT into transportation network. It has following features and objectives:



eg: using satellite based operation of Rapid Metro, connecting and linking vehicles to traffic lights using IOT technology.

Need for ITS in India

* Heavy vehicle encroachment - on roads - heavy traffic, opportunity cost of delays
* Pollution & standard of living - has deteriorated due to reliance of private vehicles

eg: Delhi equated to Gas Chamber by SC.

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* Growing economy : requires smarter and intelligent mobility for work and trade
* Existing infrastructure : have failed to provide the needs and demands.

CAST: Hyperloop technology is being currently tested in India by SpaceX.

Challenges in deploying :

* Financial
① requires heavy investment and technology which Indian private enterprises as well as government lacks.
② Has higher risk due to possibility of failure

* Economical
① argument of using limited funds and resources in upgrading current infrastructure rather moving into new realm of ITS.
② Private participation through PPP is the challenge.

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* Structural ① Requires internet penetration; digital literacy and people participation - still at nascent stage in India
② have and have nots : as rural region will be deprived of such modes in recent times.

Solution lies in:

* developing smart cities and counter-magnets with smart transportation corridors
* leveraging IOT, AI and Big Data through harnessing 5G technology
* streamlining Ease Doing Business.

Transportation is the bloodline of the economy. Intelligent transportation for intelligent economy is mandatory.

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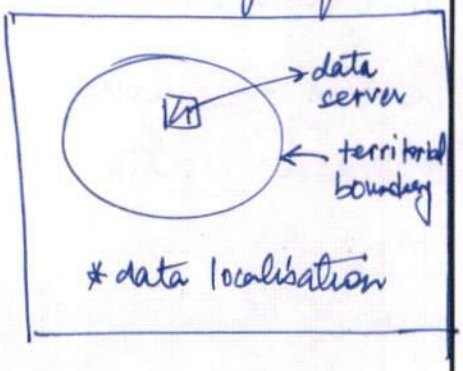
19. (1) Explain the concept and significance of Data Localisation. Also discuss its (2) limitations in strengthening law enforcement efforts in the context of Srikrishna Committee report and the draft Personal Data Protection Bill, 2018. **(250 Words) 15**

B N Srikrishna Committee has recently recommended the Data Protection Framework which has provisions and features:

* Basic data principles → data minimisation
  → consent
  → data security
* data localisation
* penalties ; time frame for reporting data breach

Data localisation

Data localisation refers to storing the data of businesses and transactions within the territorial boundary of the nation in a server.



* data localisation

* Its significance lies in:

(1) Protecting the data – both online as well as offline

(2) Preventing data colonisation by MNCs

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③ Preventing misuse of data by private entities - bringing accountability

④ maintaining & ensuring privacy of the data subjects.

⑤ Access to data in case of issues of grave emergency such as national security threat.

Its limitations: in strengthening law enforcement efforts:

① cloning of data to other servers is possible

② Globalised and interconnected world - thus difficult to put a check on data breach & leak

③ cyberattacks

④ issues of surveillance by state and misuse of data on privacy related laws - thus localisation does not ensure unhindered accessibility.

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Solution lies in

① robust cyber-security infrastructure
② cooperation with private sector enterprises in cyber-security
③ seven principles of data security.

Data is the new oil in 21st century and requires adequate safeguards.

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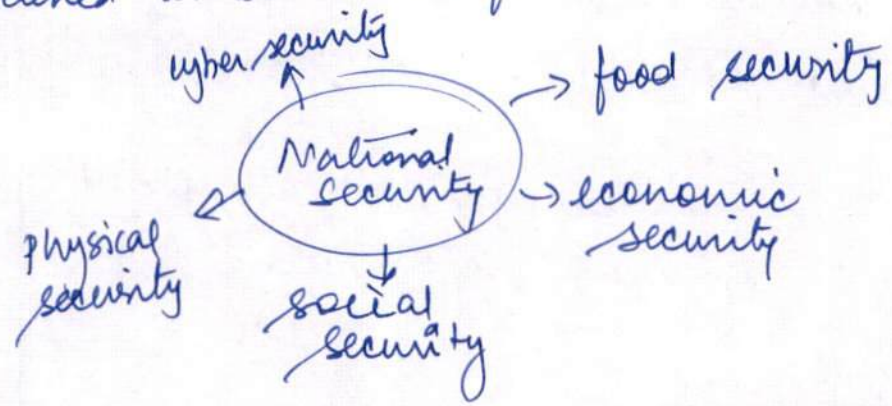
20. What is the link between illegal immigration and national security? In this context, critically discuss the exercise of creating a National Register of Citizens in Assam. **(250 Words) 15**

The dimensions of national security has been widened under the UN framework to



Illegal immigration poses a threat to national security and its dimensions in many ways:

Link between illegal Immigration & ~~Social~~ National security.

* Physical security → ① As the illegal immigrant may belong to terrorist org, radicalised youth. eg: NIA's claim on Rohingya refugees.
② Involvement in criminal activities (drug trafficking) etc to earn living

* Economic → ① pressure on limited resources
② Informal jobs being hijacked

* Political → ① vote bank politics may lead to regional tensions. eg: Assam Riots

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* Food Security → ① pressure on limited food resources
→ ② encroachment of land

NRC and National Security

NRC refers to a register of bonafide citizens of Assam. The recent NRC updation is to take into account:

* NRC of 1951
* names included in electoral list prior to 1971

NRC - a step to tackle National Security issue

* Influx of Bangladeshi immigrants in Assam and north-eastern states pose direct threat to their
culture, economy, rights, security

CASE: Various riots have broken out in the past including recent Assam Riots in 2014

* Linkages of such illegal migrants with

Don't write anything this margin (इस भाग में कुछ ना लिखें)

criminal activities & terrorism has been established by NIA.

* Insurgents in North East also use this situation to their advantage.

However, NRC also raises concerns:

* On humanitarian ground
* cut off date as per Assam Record is too far off - various generations have lived here as Indians
* not all refugees can be termed as threat; distress migration needs to be factored in.

eg: Global Compact on Migration and Refugees have been signed by India.

Solution lies in:

* Article 21 - Right to life includes life of Refugees too (SC in Pong Lian Kahu judgement)
* Thus, a balanced approach such as voting rights suspension, stronger border management needs to be considered.